Number O	12/15 12/15 12/15 12/15
(ring adj bus ringbus) SAME substrate near3 bias\$ (photodetector detector) near4 array and (ring adj bus ringbus) (photodetector detector) near4 array and (ring adj bus ringbus) (photodetector detect\$ detector) near4 array and ((peripheral ring) near3 bus ringbus) (photodetector detect\$ detector) near4 array and ((peripheral ring) near3 bus ringbus) ((photodetector detect\$ detector) near4 array and ((peripheral ring) near3 bus ringbus)) not ((photodetector detector) near4 array and (ring adj bus ringbus)) (257/\$ 438/\$ 250/\$).icls. (US-PGPUB; EPO; JPO; IBM_TDB USPAT; 2003/1 US-PGPUB; EPO; JPO; IBM_TDB USPAT; US-PGPUB; I0:50 IBM_TDB USPAT; US-PGPUB; EPO; JPO; IBM_TDB USPAT; US-PGPUB; EPO; JPO;	12/15 12/15 12/15 12/15
2 8 (photodetector detector) near4 array and (ring adj bus ringbus) 3 267 (photodetector detect\$ detector) near4 array and (peripheral ring) near3 bus ringbus) 4 259 ((photodetector detect\$ detector) near4 array and ((peripheral ring) near3 bus ringbus) 5 ((photodetector detect\$ detector) near4 array and ((peripheral ring) near3 bus ringbus)) not ((photodetector detector) near4 array and (ring adj bus ringbus)) 147174 (257/\$ 438/\$ 250/\$).icls. 2003/1 2003/1 10:50 EPO; JPO; EPO; JPO; IBM_TDB USPAT; US-PGPUB; EPO; JPO; 10:50 147174 (257/\$ 438/\$ 250/\$).icls.	12/15 12/15 12/15
3 267 (photodetector detect\$ detector) near4 array and ((peripheral ring) near3 bus ringbus) 4 259 ((photodetector detect\$ detector) near4 array and ((peripheral ring) near3 bus ringbus)) not ((photodetector detector) near4 bus ringbus)) not ((photodetector detector) near4 array and (ring adj bus ringbus)) 5 147174 (257/\$ 438/\$ 250/\$).icls. 2003/1 US-PGPUB; EPO; JPO; IBM_TDB USPAT; US-PGPUB; EPO; JPO; ISPAT; US-PGPUB; EPO; ISPAT;	12/15 12/15
4 259 ((photodetector detect\$ detector) near4 array and ((peripheral ring) near3 bus ringbus)) not ((photodetector detector) near4 array and (ring adj bus ringbus)) IBM_TDB USPAT; US-PGPUB; EPO; JPO; USPAT; US-PGPUB; EPO; JPO; EPO; JPO; EPO; JPO; EPO; JPO; EPO; JPO;	12/15
5 147174 (257/\$ 438/\$ 250/\$).icls. USPAT; 2003/1 US-PGPUB; EPO; JPO; 2003/1	
6 14 (((photodetector detect\$ detector) near4 USPAT; 2003/1 array and ((peripheral ring) near3 bus ringbus)) not ((photodetector detector) EPO; JPO; near4 array and (ring adj bus ringbus))) IBM_TDB	
and ((257/\$ 438/\$ 250/\$).icls.) 62 (ogura-masanori\$ takahashi-hidekazu\$).in. USPAT; 2003/1 and (imager imaging detect\$3) EPO; JPO;	
10 1 ("4652899").PN. USPAT; 2003/1 US-PGPUB; EPO; JPO; TOWN TOWN TOWN TO THE POST OF THE P	
11 2 4652899.URPN. IBM_TDB USPAT 2003/1	
12 2 ("3501678" "4394676").PN. USPAT 2003/11:44	12/15
13 685 (Sonoda-Kazuhiro\$ Yoneda-Tomoya\$ USPAT; 2003/1	12/15
Inoue-Shunsuke\$ Kochi-Tetsunobu\$ EPO; JPO; IBM_TDB Takahashi-Hidekazu\$).in.	
14 65967 (image photodetector detect\$4 detector) USPAT; 2003/1 us-PGPUB; 11:54 EPO; JPO;	•
70056 (imag\$3 photodetector detect\$4 detector) IBM_TDB USPAT; US-PGPUB; L1:54 EPO; JPO;	•
11 ((imag\$3 photodetector detect\$4 detector) uspAT;	
Takahashi-Hidekazu\$).in.) (ring adj bus ringbus) SAME substrate near3 bias\$ USPAT; US-PGPUB; EPO; JPO;	·
18 0 (ring adj bus ringbus) SAME substrate USPAT; US-PGPUB; EPO; JPO; 11:59	•
19 464 (wiring ring adj bus ringbus) SAME USPAT; 2003/1 substrate near5 bias\$ US-PGPUB; EPO; JPO; IBM TDB	•

5	((imag\$3 photodetector detect\$4 detector)	USPAT;	2003/12/15
	near4 array) and ((wiring ring adj bus	US-PGPUB;	11:59
	ringbus) SAME substrate near5 bias\$)	EPO; JPO;	İ
		IBM TDB	
685	(Sonoda-Kazuhiro\$ Yoneda-Tomoya\$	USPĀT;	2003/12/15
	Inoue-Shunsuke\$ Kochi-Tetsunobu\$		12:01
	Takahashi-Hidekazu\$).in.		<u> </u>
	''		
560	(wiring ring adi bus ringbus) SAME (well		2003/12/15
Ţ			12:02
560	(wiring ring add bus ringbus) SAME (well	_	2003/12/15
300	substrate) near5 (normer hiass)		12:02
	papperace, meato /bowmer prace/		12.02
3257	(wiring ring add hus ringhus) SAME (wall		2003/12/15
3237			12:21
	Substrate/ Hears (power brass)	· ·	12.21
43	//:		2003/12/15
43	, , ,		
		·	12:03
		1 '	
	1 14	_	
0	\[\frac{1}{2} = \frac{1}{2}	1	2003/12/15
			12:21
	near3 bias\$		
3982			2003/12/15
	substrate) near5 (power bias\$ shield\$3)	1	12:22
		IBM_TDB	
76	((imag\$3 photodetector detect\$4 detector)	USPAT;	2003/12/15
	near4 array) and ((wiring ring adj bus	US-PGPUB;	12:22
	ringbus) SAME (well substrate) near5	EPO; JPO;	
	(power bias\$ shield\$3))	IBM_TDB	
33		USPAT;	2003/12/15
	near4 array) and ((wiring ring adj bus	US-PGPUB;	12:22
	ringbus) SAME (well substrate) near5	EPO; JPO;	
		IBM TDB	
		_	
	near5 (power bias\$))		
	685 560 560 3257 43 0	near4 array) and ((wiring ring adj bus ringbus) SAME substrate near5 bias\$) (Sonoda-Kazuhiro\$ Yoneda-Tomoya\$ Inoue-Shunsuke\$ Kochi-Tetsunobu\$ Takahashi-Hidekazu\$).in. (wiring ring adj bus ringbus) SAME (well substrate) near5 bias\$ (wiring ring adj bus ringbus) SAME (well substrate) near5 (powwer bias\$) (wiring ring adj bus ringbus) SAME (well substrate) near5 (power bias\$) ((imag\$3 photodetector detect\$4 detector) near4 array) and ((wiring ring adj bus ringbus) SAME (well substrate) near5 (power bias\$)) (photodetector detector) near4 array and (ring near3 shield\$3) SAME substrate near3 bias\$ (wiring ring adj bus ringbus) SAME (well substrate) near5 (power bias\$ shield\$3) ((imag\$3 photodetector detect\$4 detector) near4 array and ((wiring ring adj bus ringbus) SAME (well substrate) near5 (power bias\$ shield\$3) ((imag\$3 photodetector detect\$4 detector) near4 array) and ((wiring ring adj bus ringbus) SAME (well substrate) near5 (power bias\$ shield\$3)) ((imag\$3 photodetector detect\$4 detector) near4 array) and ((wiring ring adj bus ringbus) SAME (well substrate) near5 (power bias\$ shield\$3)) not ((wiring ring adj bus ringbus) SAME (well substrate) not ((wiring ring adj bus ringbus) SAME (well substrate)	near4 array) and ((wiring ring adj bus ringbus) SAME substrate near5 bias\$) (Sonoda-Kazuhiro\$ Yoneda-Tomoya\$ US-PGPUB; EPO; JPO; IBM_TDB USPĀT; Inoue-Shunsuke\$ Kochi-Tetsunobu\$ US-PGPUB; EPO; JPO; IBM_TDB USPĀT; (wiring ring adj bus ringbus) SAME (well substrate) near5 bias\$ (wiring ring adj bus ringbus) SAME (well substrate) near5 (power bias\$) (wiring ring adj bus ringbus) SAME (well substrate) near5 (power bias\$) ((imag\$3 photodetector detect\$4 detector) near4 array) and ((wiring ring adj bus ringbus) SAME (well substrate near5 (power bias\$) ((imag\$3 photodetector detect\$4 detector) near4 array and (ring near3 shield\$3) SAME substrate near5 (power bias\$) ((imag\$3 photodetector near4 array and (ring near3 shield\$3) SAME substrate near5 (power bias\$ shield\$3) ((imag\$3 photodetector detect\$4 detector) near4 array) and ((wiring ring adj bus ringbus) SAME (well substrate) near4 array) and ((wiring ring adj bus ringbus) SAME (well substrate) near5 (power bias\$ shield\$3) ((imag\$3 photodetector detect\$4 detector) near4 array) and ((wiring ring adj bus ringbus) SAME (well substrate) near5 (power bias\$ shield\$3)) ((imag\$3 photodetector detect\$4 detector) near4 array) and ((wiring ring adj bus ringbus) SAME (well substrate) near5 (power bias\$ shield\$3)) ((imag\$3 photodetector detect\$4 detector) near4 array) and ((wiring ring adj bus ringbus) SAME (well substrate) near5 (power bias\$ shield\$3)) ((imag\$3 photodetector detect\$4 detector) near4 array) and ((wiring ring adj bus ringbus) SAME (well substrate) near5 (power bias\$ shield\$3)) ((imag\$3 photodetector detect\$4 detector) near4 array) and ((wiring ring adj bus ringbus) SAME (well substrate) near5 (power bias\$ shield\$3))